<u>REMARKS</u>

Reconsideration and further examination are respectfully requested.

<u>Rejections under 35 U.S.C. §112, first paragraph</u>

Claims 1 and 20 were rejected under 35 U.S.C. §112, first paragraph for failing to comply

with the written description requirement. In particular, the Examiner states, at page 2 of the

office action:

"… Regarding claim 1, the amended subject matter "selectively modifying a priority of

the traffic in response to…" as disclosed in lines 5-9 of claim 1 is not properly described

explicitly or implicitly in the specification. The specification does not indicate and demonstrate

clearly how this "selectively modifying a priority of the traffic" is to be performed. Regarding

claim 20, the amended subject matter "selectively modifying a priority of the traffic using

parameter information …" as disclosed in lines 7-10 of claim 20. The specification does not

indicate and demonstrate clearly how this "selectively modifying a priority of the traffic using

parameter information" be performed…."

Applicants have amended the language of the claims to recite:

"…when the type of packet traffic is unicast type, selectively modifying *a priority queue

associated with the traffic* in response to a destination parameter of the packet traffic; and

when the type of packet traffic is multicast type, selectively modifying *the priority queue

associated with the traffic* in response to a source parameter of the packet traffic…"

Applicant respectfully submits that such a limitation is amply supported by Applicant's

specification, including at page 2, 'The queue assignment of at least one type of packet traffic is

automatically changed from a queue having a first priority to a queue having a second priority…"

Paragraph [00049] which also provides support for the claim, and is replicated below:

"… Still further, dynamic filtering decisions may be made on how to process packets other than choosing whether they should go to a priority or best effort queue; *for example, they may be dropped or copied, or traffic of a specific type as described above may be diverted.* Packet headers may be modified, and use of differentiated services (DS), quality of service (QoS), TOS, TTL, destination and the like is possible as long as it is supported by the hardware. The configurability of filtering and subsequent processing in the invention is, in fact, limited only by the hardware and numerous possibilities for filtering and subsequent processing of traffic other than those described herein will be readily apparent to those skilled in the art after reading and understanding this application…"

Accordingly, Applicant respectfully submits that sufficient support is provided in Applicants' specification for the claimed invention, and request that the rejection under 35 U.S.C. §112, first paragraph be withdrawn. The Examiner is thanked for the careful analysis of the claim language.

Objections to the claims

Claim 13 was objected to for various informalities. Applicant had previously amended claim 13 in the response of April 2007 to correct this informality, and are therefore unable, after best efforts, to identify the subject matter which is objected to by the Examiner. As such, it is requested that this objection be withdrawn.

Rejections under 35 U.S.C. §102

Claims 1, 3-10, 13-15, 17 and 19-24 were rejected under 35 U.S.C. §102(e) as being anticipated by Hoffman.

Hoffman:

Hoffman describes a system and method for multi-layered network element for forwarding received packets to appropriate output ports, while detecting and handling congestion at the output ports. (See Hoffman, column 5, lines 3-7).

Hoffman describes, at column 19, line 37 through column 20 line 3:

> "... Output ports 56i use the global priority information to determine to which queue Qi a given packet will be forwarded as long as Force BE (Best Effort) information (sic) also in the associated memory 42 and associated with the packet, does not indicate a Best Effort override of the global priority information. If the Force BE information does indicate an override, then that packet will be sent to the low priority queue. The implementation of the Force BE allows forcing Best Effort on a per-output-port 56i basis. Preferably, this is done by having a Force BE field in the associated memory 42 associated with an entry, the field having an indicator for each output port 56i. In the preferred embodiment, this is implemented using a single bit per output port 56i.
>
> Included in the output port 56i is a mapping logic 302 that translates the global priority information into a queue selection signal for storing the pointer from input port 50i.
>
> The global priority information is contained in a associated memory 42 entry field of three bits. The three bits are passed to the mapping logic 302 which outputs the queue selection signal. The three global priority bits associated with the packet entering the output port 56i from the buffer memory 44 are mapped by the mapping logic 302 into two local priority bits by the mapping logic 302, in order to determine the appropriate output queue for the packet, and then the mapping logic 302 generates the queue selection signal. This mapping is determined by two programmable queue priority threshold values found in the mapping logic 302. A first programmable priority threshold register PTR1 stores a first threshold value and a second programmable priority threshold register PTR2 stores a second threshold value. The mapping is programmable by the processor 32 by changing the values in the threshold registers, PTR1, PTR2..."

Accordingly Hoffmann describes a method which uses a programmable priority threshold to assign packets to priority queues.

In contrast, the present invention provides a method of dynamically assigning packets to priority queues in response to changing environmental conditions, where the queue selection method uses different fields of the packet to determine priorities depending upon whether the packet is a unicast packet or a multicast packet. For example, claim 1 recites:

"…when the type of packet traffic is unicast type, selecting a priority queue to associate with the traffic in response to a destination parameter of the packet traffic … and … when the type of packet traffic is multicast type, selecting the priority queue to associate with the traffic in response to a source parameter of the packet traffic…"

Hoffman fails to teach such a limitation.

The Examiner states, at page 4 of the office action that Hoffman teaches:

"… when the type of traffic is unicast type (column 17, lines 5-9) selectively modifying a priority of the traffic in response to a destination parameter of the packet traffic (recited "an output port need not make any modifications to the header except for inserting its MAC address and computing a new packet checksum when routing unicast…" correlates to modifying a priority of the traffic in response to a destination parameter of the packet traffic…

It is noted that the full quote cited by the examiner at column 17, lines 5-9 ends with 'when routing unicast or multicast…' Thus Hoffman teaches that the *same* operation is 'performed' on the packet regardless whether the packet is a unicast or multicast packet. The Examiner's inclusion of only part of the teaching of Hoffman is misleading at best. It is further noted that the quote relied on has nothing to do with changing the priority of the packet. Rather, what Hoffman is discussing in this passage is the fact that all decision making regarding priorities is performed by the forwarding logic before it reaches the output port.

The Examiner also states, at page 4 that Hoffman teaches:

"… when the type of traffic is multicast type … selectively modifying a priority of the traffic in response to a source parameter (col. 15, lines 60-67, col 16, lines 1-2 and col. 17 lines 1-4)…."

It is noted that the Examiner has relied on the *same* passage as provided above with regard to lack of a need to perform any processing at the output port. With regard to col. 17, lines 1-4, it is noted that all that is mentioned here is a possibility of modifying a header by an output port.

Applicants fail to see how the Hoffman reference teaches the limitations of the claimed invention. No teaching or suggestion can be found in Hoffman of determining priority for a queue differently, depending upon whether the packet is a unicast or a multicast packet.

At page 13 of the office action, the Examiner states:

"… Applicant argues reference Hoffman does not mention or suggest the claimed limitations of 'selectively modifying the priority…' Applicants feel that this is a mischaracterization of the Applicant's remarks. In particular, Applicants would like to stress that a key difference between the claimed invention and Hoffman is that, when selectively modifying the priority, *different fields of the packet* are evaluated depending upon whether the packet is a unicast or multicast packet. No such structure is shown of suggested by Hoffman.

Accordingly, for at least the reason that Hoffman fails to teach or suggest every limitation of the independent claims of the invention, it is requested that the rejection be withdrawn.

In addition, Applicant believes that the claims are distinguishable from Hoffman for the following reasons.

The portions of Hoffman cited by the Examiner merely use the terms multicast and unicast. For example, column 16, lines 62-67 through column 17 lines 1-9 states:

"…Entries for layer 3 may include additional information. The entry may indicate that only the first 64 bytes of the packet should be sent to the processor 32 for subsequent processing. *The entry may indicate whether the packet is part of a multicast routing. If so, then the output port 50i should decrement the header checksum, forward the packet to the indicated output ports 56, and indicate that the output port 561 need to replace the layer 2 source address of the packet the output port 56i 's MAC address.* Other types of header modifications will be readily apparent to those skilled in the art to implement proper routing.

The entry in the associated memory 42 may also include the next hop destination address to be used to replace the incoming destination in unicast routing. In a unicast route, the incoming packet would have had its destination address as the multi-layer network element 12…"

No mention or suggestion of the claimed limitations of 'selectively modifying the priority queue associated with the packet traffic' as recited in the claims of the present invention is taught or suggested by this passage.

Column 15, lines 60-67 mentions the consideration as to whether 'any priorities should be added on the output port…', a determination which is made based on the header.

Hoffman mentions in the abstract that priorities of flows may be altered in response to queue fullness. However, there is no mention or suggestion of selectively modifying the priority queue to associate with traffic based on different parameters for unicast and multicast packets. Accordingly, for at least this reason, claim 1 as well as independent claims 13 and 20 are patentably distinct over Hoffman and it is requested that the rejection be withdrawn.

Dependent claims 3-10, 12, 14-19 and 20-24 serve to further limit their parent independent claims and are allowable for at least the same reason as their parent claims.

Rejections under 35 U.S.C. §103

Claims 11, 16 and 18 were rejected under 35 U.S.C. as being unpatentable over Hoffman in view of Bowman-Amuah (US 6,427,132)

Bowman-Amuh:

Bowman-Amuh is directed at "…a system, method and article of manufacture are provided for demonstrating e-commerce capabilities on a network via a simulation. Data connectivity is provided over a network between a simulated user, a simulated product distributor, a simulated product vendor, and a simulated financial service provider. An electronic catalog is displayed over a network that shows a product for sale by the simulated product vendor. The simulated user is shown browsing the electronic catalog on the network. Further, a consultation over the network, relating to the product for sale shown in the electronic catalog, is depicted between the simulated user and the simulated product distributor. Selection of the product by the simulated user is illustrated. The simulated user is portrayed to authorize payment alter an on-line review of an account of the user…" (Bowman-Amuh, Abstract)

The Examiner appears to rely on Bowman-Amuh as teaching the limitation of using the FTP protocol, and states :

'It would have been obvious … to include a protocol of traffic includes FTP such as that taught by Bowman-Amuh in order to provide a system, method and article of manufacture are provided for demonstrating ecommerce capabilities on a network via a simulation as suggested by Bowman-Amuh…'

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Applicant respectfully submits that the combination of Hoffman and Bowman-Amuh fails to satisfy this burden for at least the below reasons

No motivation for the modification suggested by the Examiner

"There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." *In re Rouffet,* 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) (The combination of the references taught every element of the claimed invention, however without a motivation to combine, a rejection based on a *prima facie* case of obvious was held improper.). The level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999).

The Examiner appears to attempt to combine two non-analogous references to meet the claimed invention. Hoffman is directed at a method and apparatus of controlling queue congestion, while Bowman-Amuh is concerned with ecommerce. Applicants respectfully submit that one would not be motivated to utilize teachings of non-anologous ecommerce art in Hoffman.

In addition, exact motivation provided by the Examiner is unclear; it appears that the Examiner is stating that it one would be motivated to provide ecommerce simulations (as taught by Bowman), in the network of Bowman. Such a motivation does not appear to involve the teachings of Hoffman.

It is noted that the motivation that should be provided is one that would motivate one, at the time of the invention, to modify the references *in the particular manner claimed.*

"Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references." Dembiczak, 175 F.3d at 999; see also Ruiz, 234 F.3d at 665 (explaining that the temptation to engage in impermissible

hindsight is especially strong with seemingly simple mechanical inventions). This is because "[c]ombining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight." Dembiczak, 175 F.3d at 999. Therefore, we have consistently held that a person of ordinary skill in the art must not only have had some motivation to combine the prior art teachings, but some motivation to combine the prior art teachings in the particular manner claimed. See, e.g., In re Kotzab, 217 F.3d 1365, 1371 (Fed. Cir. 2000) ("Particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed." (emphasis added)); In re Rouffet, 149 F.3d 1350, 1357 (Fed. Cir. 1998) ("In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed." (emphasis added)).

Accordingly, for at least the reason that no motivation can be found for the modification suggested by the Examiner, it is requested that the rejection be withdrawn.

Combination neither discloses or suggests the claimed invention

Applicants have described at length above the inadequacies of Hoffman with regard to teaching the claims of the present invention. Bowman-Amuh, which deals with the simulation of e-commerce, does not overcome the inadequacies of Hoffman. Thus, for at least the reason that the combination of references fails to teach or suggest every limitation of the claims, it is requested that the rejection of claims 11, 16 and 18 be withdrawn.

Conclusion:

      Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Applicants' Attorney at the number listed below so that such issues may be resolved as expeditiously as possible.

      For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

                      Respectfully Submitted,

October 15, 2007	/Lindsay G. McGuinness/
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